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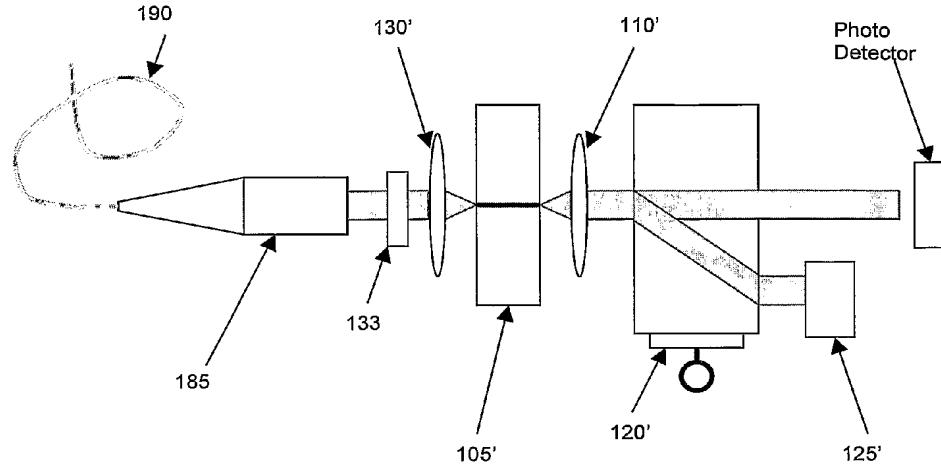
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(54) Title: A HIGH PERFORMANCE COMPACT EXTERNAL CAVITY LASER (ECL) FOR TELECOMM APPLICATIONS



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(57) Abstract: An optical tunable laser design for the optic telecommunication industry is disclosed in this invention. This new design is economical, reliable, robust and with superior optical performances. The design offers broadband tunability, high output power, narrow laser line-width and high SMSR. And in addition, the tunable laser is distinguishable from conventional designs by the mere facts that there are no moving parts, therefore, making it very reliable, and the tuning method of this invention is non-thermal and non-mechanical making its tuning very fast in the sub-millisecond range. In the manufacturing front, it is low cost and easy to produce. It can be achieved with automation equipment like those used in the IC placement and PC assembly industry, therefore, the products as that disclosed in this invention can be provided with significantly reduced production costs and marketed with very competitive price. The side-mode-suppression ratio (SMSR) is further increased by implementing an etalon having a specific fineness to cooperate with the Acousto-optical tuning filter (AOTF).